

LIST OF FISHES NOW IN THE U. S. NATIONAL MUSEUM, COLLECTED IN NICARAGUA BY DR. LOUIS F. H. BIRT.

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A small collection of fishes has been made in Nicaragua by Dr. Louis F. H. Birt. These were sent to the U. S. National Museum, where they were received December 14, 1888. Of these specimens those numbered from 39907 to 39912 are said to be from (Lake?) Nicaragua; the others (39913 to 39920) from a point 40 miles above the mouth of the Rio San Juan, which is the outlet of Lake Nicaragua. This would be about half-way between the lake and Greytown, at the mouth of the river.

39907, 39908. *Ailurichthys filamentosus* (Swainson). (*Felichthys filamentosus* Swainson; *Galeichthys blochi* Cuv. & Val.)

This species greatly resembles *Ailurichthys marinus*, with which it has hitherto been usually confounded. It is probable that the latter is chiefly or wholly confined to the coast of the United States, and the tropical representatives of the species belong to the present type, for which *filamentosus* is the oldest specific name.

The chief difference is in the much greater development of the occipital process or buckler in *A. filamentosus* as compared with *A. marinus*. The anal rays in our specimens of *A. marinus* are 23; in *A. filamentosus*, 26; shield on top of head much more extensively rough than in *A. marinus*, the granulations extending on each side of the fontanelle to before it; granulated area before occipital process broader than long, its width more than half head; occipital process triangular, emarginate behind, its width at base about $1\frac{1}{6}$ in its length and highly granular; basal bone of dorsal spine short, but extending down for a considerable distance saddlewise, its prolongations visible through the skin. (In *A. marinus* the occipital process is small and oblong, of nearly the same width behind as before.) Dorsal spine a little shorter than head, little longer than pectoral spine; dorsal filament reaching to or beyond adipose fin; pectoral filament to just beyond front of anal; maxillary barbels to end of pectoral spine; color of *A. marinus*.

39909. *Chalcinopsis dentex* Günther.

A large specimen.

39910, 39911. *Rhamdia guatemalensis* (Günther).

These specimens agree fairly well with Günther's account, except that the tip of the anal does not reach nearly to the end of the adipose fin, when laid backward. One has 12 anal rays, the other 13.

39912. *Heros motaguensis* Günther.

Two specimens; no distinct dark spot on subopercle; otherwise agreeing fairly with descriptions.

39913. *Eulamia nicaraguensis* Gill.

A good specimen of this interesting fresh-water shark, agreeing well with Gill's description; both dorsals and caudal edged with black.

39914. *Philypnus dormitor* (Lacépède). (*Electris longiceps* Günther.)39915. *Heros dovii* Günther.39916. *Heros basilaris* Gill and Bransford.

Four specimens.

41001. *Heros aureus* Günther.

Small specimens, numbered as young of the preceding.

39917. *Heros nigrofasciatus* Günther.

Two specimens.

39918. *Tetragonopterus fasciatus* (Cuvier).39919. *Heros nicaraguensis* Günther.

Head less elevated above than in Günther's figure; lateral spot very distinct; other bands very obscure.

39920. *Heros friedrichstali* Heckel.

No distinct dark cross bands.

39958. *Anacyrtus guatemalensis* Günther.

This specimen was with the others, but it is not included with the memoranda of Dr. Birt's collection.

Of the fourteen species here enumerated none are new. The following do not seem to have been previously recorded from the basin of Lake Nicaragua:

Ailurichthys filamentosus.
Rhamdia guatemalensis.
Tetragonopterus fasciatus.
Chalcinopsis dentex.

Heros aureus.
Heros nigrofasciatus.
Heros motaguensis.
Heros friedrichstali.

INDIANA UNIVERSITY, March 14, 1889.